Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

NATIONAL QUALITY MEASURES CLEARINGHOUSE

General

Title

Non-Hodgkin lymphoma: percent of patients with lymphoma whose initial lymphoma diagnosis was established by one of the following: incisional or excisional biopsy AND immunohistochemical characterization, OR core needle biopsy AND appropriate ancillary techniques employed.

Source(s)

American Society of Hematology (ASH). Non-Hodgkin lymphoma measure set: measure specifications. Washington (DC): American Society of Hematology (ASH); 2017 Feb. 36 p.

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percent of patients with lymphoma whose initial lymphoma diagnosis was established (or confirmed) by one of the following:

Incisional or excisional biopsy of the lymph node AND
Immunohistochemical characterization
OR

Core needle biopsy AND
Appropriate ancillary techniques employed (at least one of the following must have been done)
- Cell phenotype for immunoglobulin heavy chain variable (IgHV) and/or T-cell receptor (TCR) gene rearrangements
- Fluorescence in situ hybridization (FISH) for major translocations (at least one positive result [rearrangement] consistent with a lymphoid neoplasm)
- Immunophenotypic analysis

Rationale

Support (verbatim) from National Comprehensive Cancer Network (NCCN) guidelines:
In all cases, the most important first step is to make an accurate pathologic diagnosis. The basic pathological evaluation is the same in each guideline though some further evaluation may be useful in certain circumstances to clarify a particular diagnosis.

An incisional or excisional lymph node biopsy is recommended to establish the diagnosis of non-Hodgkin lymphoma (NHL). Core needle biopsy is discouraged unless the clinical situation dictates that this is the only safe means of obtaining diagnostic tissue. Fine needle aspiration (FNA) biopsy is widely used in the diagnosis of malignant neoplasms, but its role in the diagnosis of lymphoma is still controversial. Since the revised Revised European-American Lymphoma (REAL)/World Health Organization (WHO) classification is based on both morphology and immunophenotyping, FNA alone is not acceptable as a reliable diagnostic tool for NHL. However, its use in combination with ancillary techniques may provide precise diagnosis thereby obviating the need for a more invasive biopsy in highly selected circumstances. Recent studies have shown that the diagnostic accuracy of FNA improves significantly when it is used in combination with immunohistochemistry (IHC) and flow cytometry.

In the NCCN guidelines, FNA alone is not suitable for an initial diagnosis of NHL. However, in certain circumstances, when a lymph node is not easily accessible, a combination of core biopsy and FNA in conjunction with appropriate ancillary techniques (polymerase chain reaction [PCR] for immunoglobulin heavy chain variable [IgHV] and/or T-cell receptor [TCR] gene rearrangements; fluorescence in situ hybridization [FISH] for major translocations [at least one positive result (rearrangement) consistent with a lymphoid neoplasm (addition from American Society of Hematology [ASH] Lymphoma Task Force)]; immunophenotypic analysis) may be sufficient for diagnosis. In other entities presenting in leukemic phase, such as follicular lymphoma (FL) or mantle cell lymphoma (MCL), a biopsy is still preferred to clarify histological subtype (NCCN, 2015).

Evidence for Rationale

American Society of Hematology (ASH). Non-Hodgkin lymphoma measure set: measure specifications. Washington (DC): American Society of Hematology (ASH); 2017 Feb. 36 p.

National Comprehensive Cancer Network (NCCN). NCCN clinical practice guidelines in oncology: non-Hodgkin's lymphoma. Version 12.2016. Fort Washington (PA): National Comprehensive Cancer Network (NCCN); 2015 Nov 24.

Primary Health Components

Non-Hodgkin lymphoma (NHL); incisional biopsy; excisional biopsy; immunohistochemical characterization; core needle biopsy; immunoglobulin heavy chain variable (IgHV); T-cell receptor (TCR) gene rearrangement testing; fluorescence in situ hybridization (FISH); immunophenotypic analysis

Denominator Description

The number of lymphoma patients in your selection (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

The number of lymphoma patients in your selection having one of the following:

Incisional or excisional biopsy of the lymph node AND
Immunohistochemical characterization
OR

Core needle biopsy AND
Appropriate ancillary techniques employed (at least one of the following must have been done)
- Cell phenotype for immunoglobulin heavy chain variable (IgHV) and/or T-cell receptor (TCR) gene rearrangements
- Fluorescence in situ hybridization (FISH) for major translocations (at least one positive result [rearrangement] consistent with a lymphoid neoplasm)
- Immunophenotypic analysis

See the related "Numerator Inclusions/Exclusions" field.

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

Statement (verbatim) from research literature on gap:
From the perspective of a clinician attempting to design a treatment plan for patients with lymphoma, we found fine-needle aspiration (FNA) to be woefully inadequate. In 67 patients with both FNA and excisional biopsy done at the time of initial diagnosis, we found 12% concordance. An additional 21% were correctly diagnosed using the broader term of lymphoma, without further histologic subtyping. We consider this group as having an inadequate diagnosis for management. Therefore, 88% of patients were given FNA cytology diagnoses that were clinically inadequate on which to base treatment decisions. More worrisome is our finding that 15% were given a wrong diagnosis (a specific but incorrect histologic subtype).

Those FNAs evaluated with immunophenotyping, in addition to morphology, had a significantly better correlation with excisional biopsy than those FNAs evaluated alone (29% v 2%, respectively; *P*=.002). Although emphasis is placed on the importance of ancillary techniques, these additional tests were used less than 50% of the time by pathologists in our review. For the initial diagnosis of lymphoma, ancillary techniques were used 41% of the time (Hehn, Grogan, & Miller, 2004).

Statement from American Society of Hematology (ASH) Lymphoma Task Force on gap:
This measure has been in use for the American Board of Internal Medicine (ABIM) Maintenance of Certification Performance Improvement Module since July 2013. Performance over the first 10 months (through May 2014) among this highly select group of hematologists is 93%. We believe performance among all hematologists would be somewhat lower. Since accurate diagnosis and staging are the foundation for all treatment, we suggest this gap remains significant.

Evidence for Additional Information Supporting Need for the Measure

American Society of Hematology (ASH). Non-Hodgkin lymphoma measure set: measure specifications. Washington (DC): American Society of Hematology (ASH); 2017 Feb. 36 p.

Hehn ST, Grogan TM, Miller TP. Utility of fine-needle aspiration as a diagnostic technique in lymphoma. J Clin Oncol. 2004 Aug 1;22(15):3046-52. PubMed

Extent of Measure Testing

The non-Hodgkin lymphoma (NHL) measure set was developed by the American Society of Hematology (ASH) using a rigorous methodology (adapted from the American Medical Association [AMA]-convened Physician Consortium for Performance Improvement [PCPI]) and has been field tested. The NHL measure set was accepted by American Board of Internal Medicine (ABIM) for use with practice improvement modules meeting Part 4 of Maintenance of Certification Requirements in 2013.

Evidence for Extent of Measure Testing

Frechette S. (Principal, Northfield Associates, LLC, Warren, VT). Personal communication. 2014 Dec 10. 1 p.

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Ambulatory/Office-based Care

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Individual Clinicians or Public Health Professionals

Statement of Acceptable Minimum Sample Size

Unspecified

Target Population Age

Unspecified

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Living with Illness

IOM Domain

Effectiveness

Data Collection for the Measure

Case Finding Period

Unspecified

Denominator Sampling Frame

Patients associated with provider

Denominator (Index) Event or Characteristic

Clinical Condition

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions
The number of lymphoma patients in your selection

Note: Refer to the original measure documentation for a list of International Classification of Diseases, Tenth Revision (ICD-10) codes used in lymphoma patient selection.

Exclusions
None

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions
The number of lymphoma patients in your selection having one of the following:

- Incisional or excisional biopsy of the lymph node AND
  Immunohistochemical characterization
  OR
- Core needle biopsy AND
  Appropriate ancillary techniques employed (at least one of the following must have been done)
  - Cell phenotype for immunoglobulin heavy chain variable (IgHV) and/or T-cell receptor (TCR) gene rearrangements
  - Fluorescence in situ hybridization (FISH) for major translocations (at least one positive result [rearrangement] consistent with a lymphoid neoplasm)
  - Immunophenotypic analysis

Note: This requires documentation in the patient's medical record that the initial lymphoma diagnosis was established by you (or confirmed by you if done by another physician) using an appropriate biopsy as described in the National Comprehensive Cancer Network (NCCN) guidelines.

Exclusions
None

Numerator Search Strategy

Fixed time period or point in time

Data Source

Administrative clinical data

Paper medical record

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

Unspecified

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a higher score

Allowance for Patient or Population Factors

not defined yet

Standard of Comparison

not defined yet

Identifying Information

Original Title

Measure 1: the percent of patients with lymphoma whose initial lymphoma diagnosis was established by you (or confirmed by you) by one of the following: incisional or excisional biopsy AND immunohistochemical characterization, OR core needle biopsy AND appropriate ancillary techniques employed.

Measure Collection Name

Non-Hodgkin Lymphoma Measure Set

Submitter

American Society of Hematology - Medical Specialty Society

Developer

American Society of Hematology - Medical Specialty Society

Funding Source(s)

The American Society of Hematology

Composition of the Group that Developed the Measure

The American Society of Hematology (ASH) Lymphoma Task Force:

Joseph Connors, MD (*Co-Chair*)
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Lauren Patrick (Healthmonix)

Financial Disclosures/Other Potential Conflicts of Interest

Unspecified

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2017 Feb

Measure Maintenance

American Society of Hematology (ASH) reviews/updates measures annually

Date of Next Anticipated Revision

Unspecified

Measure Status

This is the current release of the measure.

This measure updates a previous version: American Society of Hematology (ASH). Non-Hodgkin lymphoma measure set: measure specifications. Washington (DC): American Society of Hematology (ASH); 2015 Dec. 36 p.

Measure Availability

Source not available electronically.

For more information, contact the American Society of Hematology (ASH) at 2021 L Street NW, Suite 900, Washington, DC 20036; Phone: 202-776-0544; Fax: 202-776-0545; Web site: www.hematology.org .

NQMC Status

This NQMC summary was completed by ECRI Institute on June 19, 2015. The information was verified by the measure developer on August 27, 2015.

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This NQMC summary was updated again by ECRI Institute on March 21, 2017. The information was verified by the measure developer on May 3, 2017.

Copyright Statement

Production

Source(s)

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NQMC Disclaimer

Readers with questions regarding measure content are directed to contact the measure developer.